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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,644	02/23/2004	Zarnig-Arh George Wu	07783.0063.CPUS02	2380

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EXAMINER

KOPEC, MARK T

ART UNIT	PAPER NUMBER
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1751

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/29/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/785,644

Applicant(s)

WU ET AL.

Examiner

Mark Kopec

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) 1-21, 29-32, 42-45 and 52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 22-28, 33-41, 46-51, 53-56 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

This application is a CIP of S.N. 10/618,257 (filed 07/10/03). Claims 1-56 are currently pending.

The preliminary amendment filed 11/06/06 is entered.

Applicant's election without traverse of Group II and Species II in the reply filed 10/16/06 is noted. Claims 1-20 are withdrawn (non-elected Group) and claims 29-32, 42-45 and 52 are withdrawn (non-elected species).

The instant claims are accorded a priority date of 02/23/04 (the filing date of the instant application).

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

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improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 22-28, 33-41, 46-51, 53-56 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-32 of copending Application No. 11/062,245. Although the conflicting claims are not identical, they are not patentably distinct from each other. The instant application contains three sets of claims; 1) method for improving performance of an electrophoretic display, 2) electrode protecting layer composition, and 3) an electrophoretic display. Each set of claims recite the use of a conductive composition containing nanoparticles. The pending

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claims of 11/062,245 recite the use of the claimed conductive composition containing nanoparticles as both a display cell forming material and as a dielectric layer material. The dielectric layer is defined in the specification as "primer layer". Such is the same as instantly claimed. The specification can be used as a dictionary to learn the meaning of a term in the patent claim. *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1299, 53 USPQ2d 1065, 1067 (Fed. Cir. 1999).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United

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States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that

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was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 22, 23, 28, 33-37, 41, 46-51, 53-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogata et al (4,466,701).

Ogata discloses highly reliable electrooptical device comprises a pair of electrode plates facing each other with a space and sealed along their periphery by a sealing material to form a cell and an electrooptical material sealed in the cell. The device is characterized in that a protective layer of an electrically conductive material comprising electrically conductive particles and a binder is coated on each lead terminal extending outside the sealing material and the protective layer is partially embedded in the sealing material (Abstract). The electrooptical devices include liquid crystal display devices, electrochromic display devices or electrophoretic display devices, which comprise a pair of electrode plates facing each other with a space and sealed along their periphery by a sealing material to form a cell and an electrooptical material sealed in the cell, and they may be used alone or in combination (Col 2, lines 39-41). The protective

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layer of the present invention is made of an electrically conductive material composed of a mixture comprising electrically conductive particles and a binder. It is thereby possible to readily form a relatively thick protective layer. As the electrically conductive particles, there may be used particles of carbon, gold, silver, copper, chromium, nickel, titanium and so forth. They are mixed in an amount of from 10 to 90%. The particles may not necessarily be spherical but they may be, for instance, in a form of fibers. As the binder, there may be used a variety of binders such as an epoxy resin, a silicone resin, or a phenol resin. It is optionally selected depending upon the nature of the sealing material and the nature of the electrooptical material, and it is mixed in an amount of from 90 to 10% (Col 4, lines 1-17). The particle size of the electrically conductive particles must be smaller than the gap between the base plates of the electrooptical device and must usually be at most a few microns. The electrically conductive material is coated on the lead terminal usually in a thickness of from 2 to 50 μm . The disclosure of 2 μm thick layers would inherently possess submicron-sized conductive carbon particles. The examiner respectfully submits this meet the instant claimed terminology "nanoparticles". During patent examination, the pending claims must be "given their broadest reasonable

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interpretation consistent with the specification." >The Federal Circuit's en banc decision in Phillips v. AWH Corp., 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005). Note that instant claims 24-27 and 38-40 are allowed over this reference.

The reference specifically or inherently meets each of the claimed limitations.

The reference is anticipatory.

Claims 22-28, 33-41, 46-51, 53-54 are rejected under 35 U.S.C. 102(a)/(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Shibuta (5,908,585) or Glatkowski (Carbon nanotube based transparent conductive coatings).

Note that Glatkowski is available under 102(a) only.

Shibuta discloses transparent electrically conductive film having a surface resistivity of 10^2 - 10^8 ohm/sq., an overall light transmittance of at least 70%, and a haze value of at most 20% comprises an organic or inorganic transparent matrix having dispersed therein 0.01%-1 wt % of hollow carbon microfibers and 1%-40 wt % of an electrically conductive metal oxide powder (such as antimony-doped tin oxide) with an average primary particle diameter of 0.5 μ m or smaller. The matrix can be an organic polymer which is thermoplastic, thermosetting, or curable by ultraviolet radiation, or a metal oxide sol which can

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form an inorganic glass film, a hydrolyzable or heat decomposable organic metal compound, or the like (Abstract; Col 3, lines 30-35 and lines 50-52). The disclosed compositions meet the instant "intended use" limitations of "...for the formation of an electrode layer" (method claims) and "...electrode protecting composition" (composition claims).

Glatkowski discloses transparent coating compositions comprising nanometer-scale nanotubes and polymer binder (Abstract; p2 of article). The reference specifically discloses transparency and resistivity values as claimed (Abstract; section 2.1 Summary). As above, the disclosed compositions meet the instant "intended use" limitations of "...for the formation of an electrode layer" (method claims) and "...electrode protecting composition" (composition claims).

The references are anticipatory.

In the event that any minor modifications are necessary to meet the claimed limitations, such as selection of appropriate solvent or solids content, such modifications are well within the purview of the skilled artisan.

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative

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to or less material than the prior art references relied upon in the rejection above.

Applicant is reminded that any evidence to be presented in accordance with 37 C.F.R. 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Mark Kopec
Primary Examiner
Art Unit 1751

MK

December 21, 2006